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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,910	11/28/2001	Bernd Hupfeld	R.36045	5305

2119 7590 05/20/2004

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EXAMINER
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MCHENRY, KEVIN L

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/856,910	<b>Applicant(s)</b> HUPFELD, BERND	
	<b>Examiner</b> Kevin L McHenry	<b>Art Unit</b> 1725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 10a. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the

remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 5 recites the broad recitation “acting on a flowing gas” in line 1, and the claim also recites “in particular an exhaust flowing in a conduit” in lines 1-2, which is the narrower statement of the range/limitation. For examination purposes the examiner interpreted claim 5 to only regard “acting on a flowing gas”.

5. In the present instance, claim 5 recites the broad recitation “with a reactant” in line 2, and the claim also recites “in particular a reducing agent” in line 2, which is the narrower statement of the range/limitation. For examination purposes the examiner interpreted claim 5 to only regard “with a reactant”.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 5-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Vidusek (U.S.P. 5,176,325).

Vidusek teaches a device for acting on a flowing gas with a reactant. The device

has a supply tube connected to a conduit wall with tube having openings through which reactant is introduced into a gas flowing through the conduit. The tube has a first region that extends perpendicular to the flow of gas and a second region that extends parallel to the flow of gas. The tube has a throttle disposed upstream of the tube openings in the second region of the tube. The throttle has a central opening and the tube has plural openings spaced uniformly around the circumference of the tube. (See U.S.P. 5,176,325; Figures 1, 3, 4; column 1, lines 5-8; column 2, lines 10-20; column 3, lines 7-17, 41-67).

8. Claims 5-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al. (U.S.P. 5,603,453).

Weaver et al. teach a device for acting on a flowing gas with a reactant. The device has a supply tube connected to a conduit wall with tube having openings through which reactant is introduced into a gas flowing through the conduit. The tube has a first region that extends perpendicular to the flow of gas and a second region that extends parallel to the flow of gas. The tube has a throttle disposed upstream of the tube openings in the second region of the tube. Weaver et al. teach a throttle embodiment where the throttle has a central opening with additional openings spaced around the central opening. (See U.S.P. 5,603,453; Figures 1, 2, 8; column 1, lines 11-18; column 3, lines 22-37, 56-63; column 4, lines 21-34, 50-57; column 5, lines 8-15).

### ***Conclusion***


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Renevot (U.S.P. 4,576,617), Brenner et al. (U.S.P. 6,041,594),

Mahr (U.S.P. 6,382,600), Haas (U.S.P. 3,392,522), Oshima et al. (U.S.P. 5,412,946), Linder et al. (U.S.P. 5,606,856), Berriman et al. (U.S.P. 5,992,141), Hug et al. (U.S.P. 5,431,893), Caballero (U.S.P. 3,353,335), Robinson et al. (U.S.P. 5,189,878), and Enderle et al. (U.S.P. 5,907,950) are cited of interest for illustrating the state of the art in nozzle design for acting on gas flows.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (571) 272-1181. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kevin McHenry

Kiley Stoner AU 1725  
Kiley Stoner, 5/15/04